

## Complete Summary

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### GUIDELINE TITLE

Meniscal allograft transplantation.

### BIBLIOGRAPHIC SOURCE(S)

Washington State Department of Labor and Industries. Meniscal allograft transplantation. Olympia (WA): Washington State Department of Labor and Industries; 2002 Oct. 3 p.

### COMPLETE SUMMARY CONTENT

SCOPE  
 METHODOLOGY - including Rating Scheme and Cost Analysis  
 RECOMMENDATIONS  
 EVIDENCE SUPPORTING THE RECOMMENDATIONS  
 BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
 IMPLEMENTATION OF THE GUIDELINE  
 INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
 CATEGORIES  
 IDENTIFYING INFORMATION AND AVAILABILITY

### SCOPE

#### DISEASE/CONDITION(S)

Work-related meniscal trauma

#### GUIDELINE CATEGORY

Technology Assessment  
 Treatment

#### CLINICAL SPECIALTY

Internal Medicine  
 Orthopedic Surgery  
 Surgery

#### INTENDED USERS

Advanced Practice Nurses  
 Health Care Providers  
 Health Plans  
 Hospitals

Nurses  
Physician Assistants  
Physicians  
Utilization Management

#### GUIDELINE OBJECTIVE(S)

To present recommendations for meniscal allograft transplantation

#### TARGET POPULATION

Injured workers who meet the criteria for meniscal allograft transplantation

#### INTERVENTIONS AND PRACTICES CONSIDERED

Meniscal allograft transplantation

#### MAJOR OUTCOMES CONSIDERED

- Knee pain
- Knee function
- Allograft survival rates
- Hospital for Special Surgery (HSS), Lysholm and Tegner scores
- Treatment failure rates

### METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

#### NUMBER OF SOURCE DOCUMENTS

Not stated

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

#### METHODS USED TO ANALYZE THE EVIDENCE

## Systematic Review

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Studies were grouped according to study design and examined within the context of the American Academy of Neurology Classification of Evidence Guidelines.

### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

### COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

### METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups  
Peer Review

### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline developer considered recommendations from the following groups: orthopaedic surgeons from Denmark and Sweden, and various health insurers.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

What is meniscal allograft transplantation?

Meniscal allograft transplantation involves surgically grafting a donor meniscus into the knee of a patient. Patients who have undergone meniscal repair procedures and meniscectomy may benefit from the procedure because the replacement meniscus may re-establish load bearing, shock absorption, and joint stability. Reducing stress on the tibial plateau may also help to prevent osteoarthritis development. The options for graft preservation include freshly transplanting, fresh-freezing, cryopreserving, or lyophilizing the tissue.

When is meniscal allograft transplantation a covered procedure?

Meniscal allograft transplantation in one or more compartments is a covered procedure if the patient and the affected compartment meet ALL of the following inclusion criteria.

- A. An acute, work-related trauma to the knee previously caused the need for a meniscectomy that removed at least two-thirds of the meniscus.

AND

- B. The patient's knee pain has not responded to conservative therapy.

AND

- C. The articular cartilage in the affected compartment demonstrates a chondrosis classified by the Modified Outerbridge Scale as:
- i. Grade I
  - or
  - ii. Grade II
  - or
  - iii. Grade III. If Grade III, then debridement must first produce an articular surface sufficiently free of irregularities in order to maintain the integrity of the transplanted meniscus.

AND

- D. Evidence shows that the knee is stable and has:
- i. Sufficient articular cartilage in the affected compartment to ensure the continued integrity of the allograft meniscus
  - and
  - ii. Intact ligaments
  - and
  - iii. Normal alignment
  - and
  - iv. Normal joint space

AND

- E. The patient meets the following characteristics:
- i. Too young or active for arthroplasty. The ideal patient age ranges from 20 to 45 years.
  - and
  - ii. Body Mass Index <35

and

- iii. Capable and willing to follow the rehabilitation protocol

When is meniscal allograft transplantation not a covered procedure?

Meniscal allograft transplantation is not a covered procedure in any of the following circumstances:

- A. The patient has an arthritic condition that appears on standing x-rays as joint space narrowing, osteophytes, or changes in the underlying bone. The insurer will exclude a patient if the inflammatory (rheumatoid or other) or degenerative (osteoarthritis) arthritis is any of the following.

- i. Mild and diffuse

or

- ii. Moderate to severe and localized

or

- iii. Moderate to severe and diffuse

OR

- B. The articular cartilage in the affected compartment demonstrates a chondrosis classified by the Modified Outerbridge Scale as:

- i. Grade III and has not undergone debridement

or

- ii. Grade III and has undergone debridement that has not produced an articular surface sufficiently free of irregularities in order to maintain the integrity of the transplanted meniscus

or

- iii. Grade IV

What documentation does the physician submit?

Documentation needs to address all of the requirements for a covered procedure. The Insurer may require physicians to submit the following documents to define the patient's knee condition

- A. Operative notes
- B. Reports of standing, anterior-posterior, and loadbearing x-rays
- C. Reports of technetium bone scan
- D. Arthroscopy results
- E. Reports of computerized tomography (CT) scans

F. Magnetic resonance (MR) evaluation results

For billing code information refer to original guideline document.

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence was not specifically stated for each recommendation.

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

- Meniscal allograft transplantation may benefit selected patients who have previously undergone total meniscectomy but continue to experience pain.
- Published short-term and midterm case series data suggest that meniscal allograft provides pain relief and restores some knee function.
- Patients who have undergone previous meniscectomy may benefit from the procedure because the replacement meniscus may re-establish load bearing, shock absorption, and joint stability. Reducing stress of the tibial plateau may also help to prevent osteoarthritis development.

#### POTENTIAL HARMS

Some patients develop complications including infection, hemarthrosis, synovitis, loosened bone plug, posterior horn tears after knee reinjury, osteotomy nonunion, pain from realignment hardware, bone spurs, swelling after consistent use, and graft rejection.

### IMPLEMENTATION OF THE GUIDELINE

#### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

#### IOM CARE NEED

Getting Better

#### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Washington State Department of Labor and Industries. Meniscal allograft transplantation. Olympia (WA): Washington State Department of Labor and Industries; 2002 Oct. 3 p.

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2002 Oct

### GUIDELINE DEVELOPER(S)

Washington State Department of Labor and Industries - State/Local Government Agency [U.S.]

### SOURCE(S) OF FUNDING

Washington State Department of Labor and Industries

### GUIDELINE COMMITTEE

Washington State Department of Labor and Industries

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

### GUIDELINE STATUS

This is the current release of the guideline.

### GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Washington State Department of Labor and Industries Web site](#).

Print copies: Available from the L & I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

#### AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Meniscal allograft. Washington State Department of Labor and Industries, 2002 Oct. 22. 17 p.

Electronic copies: Available in Portable Document Format (PDF) from the [Washington State Department of Labor and Industries Web site](#).

Print copies: Available from the L & I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

#### PATIENT RESOURCES

None available

#### NGC STATUS

This NGC summary was completed by ECRI on May 5, 2004. The information was verified by the guideline developer on May 20, 2004.

#### COPYRIGHT STATEMENT

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